

WHAT IS CLAIMED IS:

1. A method of correcting a measurement error, in which the impedance of an electronic component is measured by an actual measuring device generating a measurement result different from that of a standard measuring device, and then the obtained value of impedance is corrected to the value which would be obtained from the standard measuring device, the method comprising:

preparing a correction-data obtaining sample which generates an impedance equal to an arbitrary impedance of the electronic component by a measuring operation;

measuring the impedance of the correction-data obtaining sample by using the standard measuring device and the actual measuring device;

obtaining an interrelated expression of the measurement result generated by the actual measuring device and the measurement result generated by the standard measuring device, the interrelated expression uniquely indicating the relationship between the true measurement value of the standard measuring device and the true measurement value of the actual measuring device; and

correcting the impedance of the electronic component to the impedance which would be obtained from the standard measuring device by substituting the impedance of the electronic component measured by the actual measuring device into the interrelated expression so as to calculate the interrelated expression.

2. The method according to Claim 1, wherein the step of obtaining the interrelated expression comprises:

providing a signal transmission form including a factor of measurement error of each of the standard and actual measuring devices at measurement;

forming a first theoretical expression for obtaining the true measurement value of the actual measuring device in the signal transmission form and a second

theoretical expression for obtaining the true measurement value of the standard measuring device in the signal transmission form; and

- forming the interrelated expression based on the first and second
- 10 theoretical expressions, the interrelated expression including an undetermined coefficient, the undetermined coefficient being determined by substituting the impedance values of the correction data obtaining device obtained from the standard and actual measuring devices into the interrelated expression.

3. A method of determining the quality of an electronic component, in which an electronic component required to have an impedance measured by a standard measuring device is measured by an actual measuring device generating a measurement result different from that of the standard measuring device, and the
- 5 quality is determined based on the measurement result, the method comprising:
- correcting the impedance of the electronic component measured by the actual measuring device by using the method of correcting a measurement error according to Claim 1 so as to determine the quality of the electronic component by comparing the corrected impedance and the required impedance.

4. A device for measuring the characteristic of an electronic component, the device comprising:
- measuring means for measuring the impedance of an electronic component, the measured impedance being different from that measured by a standard measuring
- 5 device;
- storage means for storing the impedance of a correction-data obtaining sample measured by the standard measuring device;
- interrelated-expression calculating means for calculating an interrelated expression of the impedance of the correction-data obtaining sample measured by the
- 10 measuring means and the impedance of the correction-data obtaining sample which

is measured by the standard measuring device and which is stored in the storage means, the interrelated-expression uniquely indicating the relationship between the true measurement value of the standard measuring device and the true measurement value of the actual measuring device; and

15               correcting means for correcting the impedance of the electronic component to the impedance which would be obtained from the standard measuring device by substituting the impedance of the electronic component measured by the measuring means into the interrelated expression so as to calculate the expression.

5. The device according to Claim 4, wherein the interrelated-expression calculating means comprises:

                  means for providing the signal transmission form including a factor of measurement error of each of the standard and actual measuring devices at  
5               measurement;

                  means for forming a first theoretical expression for obtaining the true measurement value of the actual measuring device in the signal transmission form and a second theoretical expression for obtaining the true measurement value of the standard measuring device in the signal transmission form;

10               means for forming the interrelated expression based on the first and second theoretical expressions, the interrelated expression including an undetermined coefficient; and

                  means for identifying the undetermined coefficient by substituting the impedance values obtained from the standard and actual measuring devices into the  
15               interrelated expression.

6. A device for measuring the characteristic of an electronic component, the device comprising:

a measuring unit for measuring the impedance of an electronic component,  
the measured impedance being different from that measured by a standard measuring  
5 device;

a storage unit for storing the impedance of a correction-data obtaining sample  
measured by the standard measuring device;

a interrelated-expression calculating unit for calculating an interrelated  
expression of the impedance of the correction-data obtaining sample measured by the  
10 measuring unit and the impedance of the correction-data obtaining sample which is  
measured by the standard measuring device and which is stored in the storage unit,  
the interrelated-expression uniquely indicating the relationship between the true  
measurement value of the standard measuring device and the true measurement value  
of the actual measuring device; and

15 a correcting unit for correcting the impedance of the electronic component  
to the impedance which would be obtained from the standard measuring device by  
substituting the impedance of the electronic component measured by the measuring  
unit into the interrelated expression so as to calculate the expression.

7. The device according to Claim 6, wherein the interrelated-expression  
calculating unit comprises:

a unit for providing the signal transmission form including a factor of  
measurement error of each of the standard and actual measuring devices at  
5 measurement;

a unit for forming a first theoretical expression for obtaining the true  
measurement value of the actual measuring device in the signal transmission form  
and a second theoretical expression for obtaining the true measurement value of the  
standard measuring device in the signal transmission form;

- 10           a unit for forming the interrelated expression based on the first and second  
theoretical expressions, the interrelated expression including an undetermined  
coefficient; and
- a unit for identifying the undetermined coefficient by substituting the  
impedance values obtained from the standard and actual measuring devices into the
- 15   interrelated expression.